Radon gas wiped out in Kitzingen school

By Julie Moye
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When officials at the Environmental Management Office, or EMO, and Department of Defense Dependents Schools, discovered elevated radon readings at the Kitzingen Elementary School, they reacted rapidly to correct the problem before its doors opened for the fall term.

Radon, a naturally occurring soil gas, accumulates under the foundations of buildings and can easily enter through cracks and openings.

According to Kenneth Sims, Chief of the EMO, "Radon does not pose an immediate health risk; but long-term exposure to elevated levels of the gas can increase the risk of lung disease. Once we knew there was an elevated radon reading in building 319, we moved out to correct the situation."

Detecting the problem

The discovery of the elevated radon reading resulted as part of efforts to comply with the Army Radon Reduction Program, or ARRP. The EMO initiated radon samplings of several building throughout the 417th BSB. Although early monitor readings provided conflicting reports, the EMO and DoDDS persistently sought more accurate information.

After a second round of sampling produced "unreadable" data due to "damaged detectors" the EMO requested the help of the U.S. Army Corps of Engineers, Europe District. Curt Ohlsen, Environmental Engineer at EMO said, "The Corps did a great job in reacting quickly to our needs."

"The environmental company performed 'real-time' sampling using a Continuous Radon Monitor. The results confirmed our original belief that the school's radon levels exceeded those recommended by the Environmental Protection Agency," Ohlsen said.

System installed

In response to the situation, Environmental Research and Technology Inc., or ERTI, was immediately contracted to initiate the mitigation process.

In less than five weeks, a team from ERTI installed a mitigation system inside the school's boiler room. The system consists of four large fans, a six-inch exhaust pipe and an alarm to detect system malfunctions.

According to Michael Mardis, senior scientist at ERTI, "What we're doing is drawing large volumes of air out by utilizing the school's tunnel system and pipe network that tie all three buildings together. The system itself is easy to maintain and access."

The system pulls air from beneath the building's foundation. The air is then vented to the atmosphere, preventing the radon gas from entering the school. Eventually, the soil under the floor dries out.

"We're just capturing what's under the building before it has the chance to enter," said Mardis. After a few days of operation, the new system had already reduced radon levels below four picacuries per liter of air — the EPA standard.

Safety ensured

Monitoring of radon levels will continue for the next year. "One-year is the most accurate measurement. When you look at the entire year — taking an average of all the monitors scattered throughout the buildings during various weather conditions — you get the best results. Adjustments will be made to the system as necessary to ensure that the school remains completely safe for our children," said Sims.

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